

FINAL ACTION

1. Amendment A, received on 10/23/09 has been entered into record. Claims 1-3, 5-6, and 11-14 have been amended.
2. Claims 1-14 are now pending.

Response to Arguments

3. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 2 is rejected under 35 U.S.C. 102(b) as being anticipated by Sato (JP 2004-302424).

6. As to claim 2, Sato discloses a face imaging device in which an illumination light source for illuminating an illumination light to a face is disposed in a casing having an opening formed at the front of the casing for inserting a face as an object to be imaged, a light diffusion plate (**5 or 7**) is disposed between the opening and the illumination light source for diffusing a light illuminated from the illumination light source to the front side of the face, and an imaging

camera (2) for imaging the face through a permeation hole formed in the light diffusion plate is located at the back of the casing (**Figs. 1 and 4, abstract, 0011-0012**), the face imaging device comprising: a light-shielding body (21) located behind the light diffusion plate (**5 or 7**) between the light diffusion plate and the imaging camera (2) to shield light from the illumination light source directly or reflecting off the back of the light diffusion plate from entering the imaging camera (**Fig. 3, 0019 and 0024**).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada (JP 08-299267 A).

9. As to claim 1, Sato discloses a face imaging device in which an illumination light source for illuminating a visible light to a face is disposed in a casing having an opening at a front of the casing for inserting a face as an object to be imaged (**Figs. 1, 4, abstract, 0011-0012**), a light diffusion plate (**5 or 7**) is disposed between the opening and the illumination light source for diffusing a light illuminated from the illumination light source to the front side of the face, and an imaging camera (2) for imaging the face through a permeation hole formed in the light diffusion plate is located at a back of the casing (**0011-0013**), the face imaging device comprising:

a jaw rest (9) for restricting the position of the jaw in accordance with the imaging direction such that the front and the right or left cheeks of the face are facing the imaging camera (0016,0023,0028), and

a light-shielding body (21) located behind the light diffusion plate between the light diffusion plate (5 or 7) and the imaging camera (2) to shield light from the illumination light source directly or reflecting off the back of the light diffusion plate from entering the imaging camera (Fig. 3, 0019,0024).

Sato does not disclose:

a face holding mechanism for holding the face as an object at a focused focal point of the imaging camera by a head support member capable of adjusting the forward-to-backward and vertical positions for restricting the position of a head by abutment against a head top non-observation region of the face inserted in the casing [claim 1].

wherein the head support member supports the head top non-observation region of the face at one point and is disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 9].

Hamada discloses a chin rest eye examination instrument having:

a face holding mechanism for holding the face as an object at a focused focal point of the imaging camera by a head support member (7,8) capable of adjusting the forward-to-backward and vertical positions of the face for restricting the position of a head by abutment against a head top non-observation region of the face inserted in the casing [claim 1](0007-0008, 0010-0014 and Fig. 1) to provide the face holding mechanism of Sato with additional ranges of motion in

order to position a wide range of faces and heights of the individual as well as to be able to properly align the patient/customers face to the opening which holds the camera.

wherein the head support member supports the head top non-observation region of the face at one point and is disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 9] (**0010-0011, 0013**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Sato with a head support member which contacts the face at one point and can be adjusted forward-backward and vertically as disclosed by Hamada to provide an adjustable face holding mechanism that can be adjusted based on the individual physical limitations as well as to allow one uniform contact point for the face which will also aid in aligning the face towards the camera. Also, it will also reduce time to align the position of the eye thereby reducing focal error during examination.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada.

11. As to claim 3, Sato in view of Hamada shows all the features of the claimed invention except for the light-shielding body comprises a reflection mirror for reflecting a light diverged from the illumination light source toward the imaging camera to the diffusion plate. It would have been obvious to one having ordinary skill in the art the time the invention was made to provide a light-shielding body comprising a reflection plate, since the examiner takes Office Notice of the equivalence of the light-shielding body comprising a reflection plate and the light-shielding body comprising a reflection mirror for their use in the photographic art and the selection of any of these known equivalents to reflect light back towards a specific location or

area when the light is sent towards the light-shielding body would be within the level of ordinary skill in the art.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada.

13. As to claim 6, Sato in view of Hamada shows all the features of the claimed invention except for a protrusion abutting against the back of a lower jawbone is formed on the jaw rest. To provide a protrusion abutting against the back of a lower jawbone which would provide a supporting part to that will stably hold the jaw in place in the proper location during imaging would have been obvious to one having ordinary skill in the art at the time the invention was made, since it has been held that rearranging parts of an invention involves only routine skill in the art.

14. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada as applied to claim 1 above, and further in view of Baker ('921).

Although the combined teachings of Sato in view of Hamada shows substantial features of the claimed invention (discussed above), they fail to disclose:

wherein the jaw rest comprises a plurality of jaw rest portions arranged in accordance with the imaging direction [claim 7]. wherein the jaw rest includes a jaw rest portion disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 8].

Baker discloses motorized patient support for eye examination or treatment having:

wherein the jaw rest comprises a plurality of jaw rest portions (152,154) arranged in accordance with the imaging direction [claim 7] (**col. 4, lines 52-66**) to provide multiples chin

placements in order to move a patients face from side to side to photograph with changing other parameters.

wherein the jaw rest includes a jaw rest portion disposed so as to be movable rightwards and leftwards in accordance with the imaging direction [claim 8] (**col. 4, lines 62-65**). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Sato as modified by Hamada with a jaw rest portion that can be movable right and left as disclosed by Baker to provide a jaw rest portion is movable with the patient needing to move their face, it allows the eye to be photographed with better precision and focus.

15. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada as applied to claim 1 above, and further in view of Ho et al. (US Patent No. 7,296,574 and hereinafter Ho).

Although the combined teachings of Sato and Hamada shows substantial features of the claimed invention (discussed above), they fail to disclose:

wherein the head support member supports the head top non-observation region of the face at two right and left points.

Ho discloses a forehead pad and forehead support having:

wherein the head support member supports the head top non-observation region of the face at two right and left points (**col. 4, lines 31-46, col. 5, lines 18-36 and Figs. 4-6, 8a-8c and 9**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Sato as modified by Hamada with left and right contact points for the face as disclosed by Ho to provide a means of eliminating pressure points by even distributing the

load from the patient/person forehead when it is pressed against the face holder of Sato, it will also provide optimal comfort to the patient regardless of the angle at which the overall forehead pad contacts the patient/person's head and providing a different configuration for the forehead rest contact points would have been obvious to one having ordinary skill in the art since changing the configuration would involve only routine skill in the art.

16. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada as applied to claim 1 above, and further in view of Cheng et al. (US PG Pub. No. 2007/0034775 and hereinafter Cheng).

Although the combined teachings of Sato and Hamada shows substantial features of the claimed invention (discussed above), they fail to disclose:

including a color temperature variable light source as the illumination light source, a color temperature detection sensor for detecting the color temperature of the illumination light, and a control device for variably controlling the color temperature of the illumination light source to a predetermined color temperature based on the detected color temperature [claim 11].

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the color temperature variable light sources and the color temperature is controlled by controlling the ratio of the light amount from each of the light sources [claim 12].

including an illuminance/color temperature variable light source as the illumination light source, a illuminance sensor and a color temperature detection sensor for detecting the illuminance and the color temperature of the illumination light and a control device for variably controlling the illuminance and the color temperature of the illumination light source to a

predetermined illuminance and a predetermined color temperature based on the detected color temperature [claim 13].

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the illuminance/color temperature varying light source, and the color temperature is controlled by controlling the ratio of the light amounts of each of the light sources, and the illuminance is controlled by the sum of the light amounts [claim 14].

Cheng discloses a calibrated LED light module having:

including a color temperature variable light source (10) as the illumination light source, a color temperature detection sensor (15) for detecting the color temperature of the illumination light, and a control device (14) for variably controlling the color temperature of the illumination light source to a predetermined color temperature based on the detected color temperature [claim 11] (**0010,0012 and 0017-0018**) to provide a means for each LED to generate light of an average intensity that is determined by a drive signal coupled to that LED, the light source can provide an input/interface that allows the use to change the apparent color temperature of the light from the light source in order to provide a better contrast for imaging the face exposing otherwise unnoticeable areas.

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the color temperature variable light sources and the color temperature is controlled by controlling the ratio of the light amount from each of the light sources [claim 12] (**0017-0018, 0026**) to provide light sources that provide different color temperatures in order to provide a better contrast for imaging as well as control the light intensity of each color temperature.

including an illuminance/color temperature variable light source (10) as the illumination light source, a illuminance sensor and a color temperature detection sensor (15,55) for detecting the illuminance and the color temperature of the illumination light and a control device (14) for variably controlling the illuminance and the color temperature of the illumination light source to a predetermined illuminance and a predetermined color temperature based on the detected color temperature [claim 13] (**0010,0012 and 0017-0018**) to provide a means for each LED to generate light of an average intensity that is determined by a drive signal coupled to that LED, the light source can provide an input/interface that allows the use to change the apparent color temperature of the light from the light source in order to provide a better contrast for imaging the face exposing otherwise unnoticeable areas.

wherein two or more kinds of light sources for illuminating lights of different color temperatures are provided as the illuminance/color temperature varying light source, the color temperature is controlled by controlling the ratio of the light amounts of each of the light sources, and the illuminance is controlled by the sum of the light amounts [claim 14] (**0017-0018**).

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the system of Sato as modified by Hamada with two or more kinds of light sources having different color temperatures as disclosed by Cheng to provide a means to different color temperatures with a plurality of light sources that will allow better contrast for imaging as well as sensors being able measures a weighted sum of the light from each of the LEDs (0028).

17. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada as applied to claim 1 above, and further in view of Momma and Zeskind.

Although the combined teachings of Sato and Hamada shows substantial features of the claimed invention (discussed above), they fail to disclose:

wherein a UV-light source for directly illuminating a UV-light to the face inserted into the opening and an auxiliary light source for directly illuminating an auxiliary illumination light for focusing the imaging camera are located out of the imaging area of the imaging camera and at a position not in the shade of the light diffusion plate as viewed from the opening.

Momma discloses a method and system for analysis of skin image having:

an auxiliary light source (**135 or 136**) for directly illuminating an auxiliary illumination light for focusing the imaging camera are located out of the imaging area of the imaging camera and at a position not in the shade of the light diffusion plate as viewed from the opening (**Fig. 2 and 0028, 0031**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Sato as modified by Hamada with an auxiliary light source as disclosed by Momma to provide a means of insuring that sufficient lighting is given to the imaging camera during face imaging outside of the light sources already provided to illuminate the patient's or person's face.

Zeskind discloses a method and apparatus for UV imaging having:

wherein a UV-light source (3) for directly illuminating a UV-light to the face inserted into the opening (**0007,0035,0036,0040**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Sato as modified by Hamada and Momma with a UV-light source as disclosed by Zeskind to provide different illumination conditions to more clearly show

portions of a subject's face as well as provide a better contrast under observation. Also, a UV-light is not affected by ambient light and can be used in a broad range of environments.

18. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato in view of Hamada.

19. As to claim 5, Sato discloses a face imaging device in which an imaging camera (**2**) for imaging a face is disposed in a casing and an opening is provided for inserting a face as an object to be imaged (**Figs. 1, 4 and 0011-0012**); a jaw rest (**9**) for restricting the position of the jaw in accordance with the imaging direction such that the front and the right or left cheeks of the face are facing the imaging camera (**0016,0023,0028**).

Sato does not disclose:

the face imaging device comprising: a face holding mechanism for holding the face as an object at a focused focal point of the imaging camera by a head support member capable of adjusting the forward-to-backward and vertical positions of the face for restricting the position of a head by abutment against a head top non-observation region of the face inserted in the casing.

Hamada discloses a chin rest eye examination instrument having:

the face imaging device comprising: a face holding mechanism for holding the face as an object at a focused focal point of the imaging camera by a head support member (**7,8**) capable of adjusting the forward-to-backward and vertical positions of the face for restricting the position of a head by abutment against a head top non-observation region of the face inserted in the casing (**0007-0008, 0010-0014 and Fig. 1**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Sato with a head support member which can be adjusted forward-

backward and vertically as disclosed by Hamada to provide the face holding mechanism of Sato with additional ranges of motion in order to position a wide range of faces and heights of the individual as well as to be able to properly align the patient/customers face to the opening which holds the camera.

Conclusion

20. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LINDA B. SMITH whose telephone number is (571)270-3827. The examiner can normally be reached on Monday through Friday 9:00AM-6:30PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Clayton Laballe can be reached on (571) 272-1594. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Linda B Smith/
Examiner, Art Unit 2862

/Melissa J Koval/
Primary Examiner of Art Unit 2862